

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Please amend the application as follows:

1. (previously presented): A nutritional or pharmaceutical composition comprising:
  - a)-a protein fraction containing L-serine selected from the group consisting of L-serine, protein or peptides; and
  - b)-an energy metabolism precursor selected from glycocyamine (GA), equivalents thereof, and mixtures thereof,wherein the composition is free of glycine or if glycine is present within the composition, the weight ratio of L-serine to glycine after hydrolysis of the composition is more than 2.7:1.
2. (canceled): The composition according to claim 1, wherein the energy metabolism precursor is administered at a daily dosage of at least 0.2g up to 4g per day.
3. (canceled): A composition according to either one of claim 1 or 2, wherein the protein fraction containing L-serine, present within a nutrition or pharmaceutical supplement, is administered at a daily dosage of at least 1g per day.
4. (canceled): A composition according to either one of claim 1 or 2, wherein the protein fraction containing L-serine, present within a complete nutrition or pharmaceutical composition, is administered at a daily dosage of at least 4.8g per day.
5. (canceled): A composition according to any one of claims 1-4, wherein the energy metabolism precursor and the protein fraction containing L-serine are present in a molar ratio of from 0.1:1 to 10:1.

6. (canceled): A composition according to any one of claims 1-5, wherein the composition further comprises creatine.

7. (canceled): A composition according to claim 6, wherein the energy metabolism precursor and creatine are present within the composition in a weight ratio of energy metabolism precursor creatine of from 0.2:5.

8. (canceled): A composition according to any one of claims 1-7, wherein the composition further comprises vitamins, preferably selected from vitamins B6, vitamins B12, folic acid, and mixtures thereof.

9. (canceled): A composition according to any one of claim 1-8, wherein the composition further comprises a digestible food grade carbohydrate, preferably is maltodextrin.

10. (canceled): A composition according to any one of claim 1-9, wherein the composition further comprises an aldehyde.

11. (canceled): A composition according to any one of claim 1-10, wherein the composition further comprises a mineral, preferably selected from magnesium, zinc, and mixtures thereof, more preferably is a mixture of magnesium and zinc.

12. (canceled): A composition according to any one of the claims 1-11, wherein the composition is in a form selected from liquid form, powder form, emulsion form, suspension form, gel form, bar form, cookies, sweeties, preferably powder form.

13. (canceled): Use of a composition as defined in any one of the claims 1-11, for increasing the creatine response within mammals muscle and methylation reaction capacity of organisms.

14. (canceled): Use of a composition according to claim 13, wherein said composition is administered to an athlete.

15. (canceled): Use of a composition according to claim 13, wherein said composition is administered to disease affected persons or vegetarian persons, or elderly persons.

16. (canceled): Use of a composition according to claim 13, for the stimulation and/or increase of anabolic processes and/or the providing of an increase of the lean body mass, and/or prevention and/or treatment of muscle catabolism or even cachexia and/or for the improvement of the energy status of tissues and cells.

17. (canceled): Use of a composition according to claim 13, for the prevention and/or treatment, in particular of disorders selected from cancer, neurological disorders, migraine, allergy, insulin resistance which improves glucose tolerance and decreases side effects of diabetes type II, cardiovascular and cerebrovascular disorders, hypercholesterolaemia, hypertension, subfertility, uncontrolled inflammation processes, pneumonia, and mixtures thereof, and/or prevention of hearing loss, and/or improvement of wound healing, and/or improvement of gut barrier function and/or prevention of sepsis.

18. (new): The composition according to claim 1, wherein the molar ratio of the energy metabolism precursor and the excess of L-serine versus glycine is in the range of 0.1:1 to 10:1.

19. (new): The composition according to claim 1, wherein the composition further comprises creatine.

20. (new): The composition according to claim 3, wherein the energy metabolism precursor and creatine are present within the composition in a weight ratio of at least 0.2:5.

21. (new): The composition according to claim 1, wherein the composition further comprises vitamins selected from the group consisting of vitamin B6, vitamin B12 and folic acid.

22. (new): The composition according to claim 1, wherein the composition further comprises a digestible food grade carbohydrate.

23. (new): The composition according to claim 1, wherein the composition further comprises an aldehyde.

24. (new): The composition according to claim 1, wherein the composition further comprises a mineral selected from the group consisting of magnesium and zinc.

25. (new): The composition according to claim 1, wherein the composition is in a form selected from liquid form, powder form, emulsion form, suspension form, gel form, bar form, cookies, and sweets.

26. (new): A method for increasing the creatine response within mammalian muscle and methylation reaction capacity in a mammal in need thereof, comprising administering to said mammal an effective amount of the composition according to claim 1.

27. (new): The method according to claim 11, wherein the energy metabolism precursor is administered at a daily dosage of at least 0.2g up to 4g .

28.(new): The method according to claim 11, wherein the composition is a nutritional or pharmaceutical supplement and wherein the protein fraction containing L-serine is administered at a daily dosage of at least 1g.

29. (new): The method according to claim 11, wherein the composition is a complete nutritional or pharmaceutical composition and wherein the protein fraction containing L-serine is administered at a daily dosage of at least 4.8g.

30. (new): The method according to claim 11, wherein the mammal is an athlete.

31. (new): The method according to claim 11, wherein the mammal is a disease-affected persons, a vegetarian person, or an elderly person.

32. (new): The method according to claim 11 for the stimulation and/or increase of anabolic processes and/or the providing of an increase of the lean body mass, and/or prevention and/or treatment of muscle catabolism or even cachexia and/or for the improvement of the energy status of tissues and cells.

33. (new): The method according to claim 11, for the prevention and/or treatment of disorders selected from the group consisting of cancer, neurological disorders, migraine, allergy, insulin resistance which improves glucose tolerance and decreases side effects of diabetes type II, cardiovascular and cerebrovascular disorders, hypercholesterolaemia, hypertension, subfertility, uncontrolled inflammation processes, pneumonia, hearing loss, wound healing, gut barrier function and sepsis.